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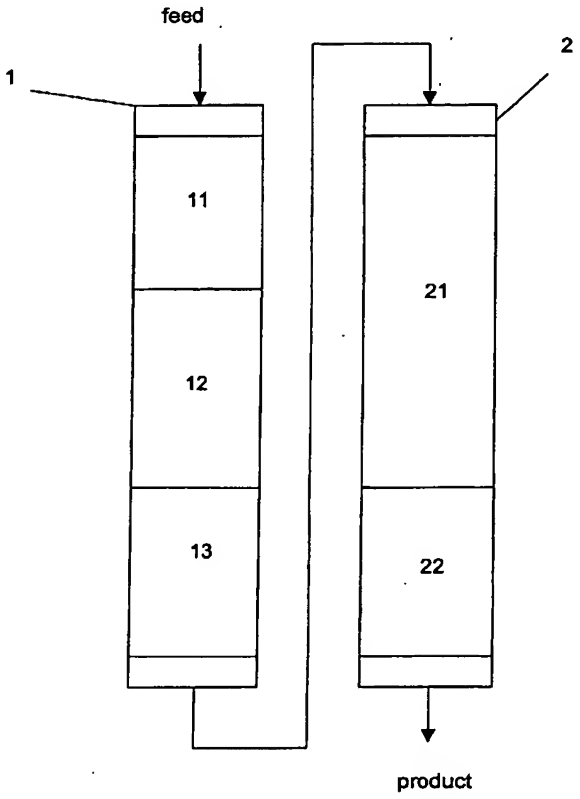
(54) Title: A PROCESS FOR THE HYDROPROCESSING OF HEAVY HYDROCARBON FEEDS USING AT LEAST TWO REACTORS



(57) Abstract: The invention pertains to a process for hydroprocessing a heavy hydrocarbon feed using at least two reactors in which a heavy hydrocarbon feed is subjected sequentially to the steps of • hydroprocessing in a first hydroprocessing reactor, in which it is subjected sequentially to a hydrodemetallisation step, a hydrodesulfurisation step carried out at a temperature higher than that of said hydrodemetallisation step, and an asphaltene removal step carried out at a temperature higher than that of said hydrodesulfurisation step, • hydroprocessing in a second hydroprocessing reactor, in which it is subjected sequentially to a hydrodesulfurisation step and an asphaltene removal step, which latter is carried out at a temperature higher than that of said hydrodesulfurisation step. It has appeared that the use of an asphaltene removal catalyst in the hightemperature end of the two reactors, in combination with the specific reaction sequence, ensures that sludge formation is kept limited while efficient contaminant removal is obtained. This combination of features makes for an efficient and highly stable process.

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